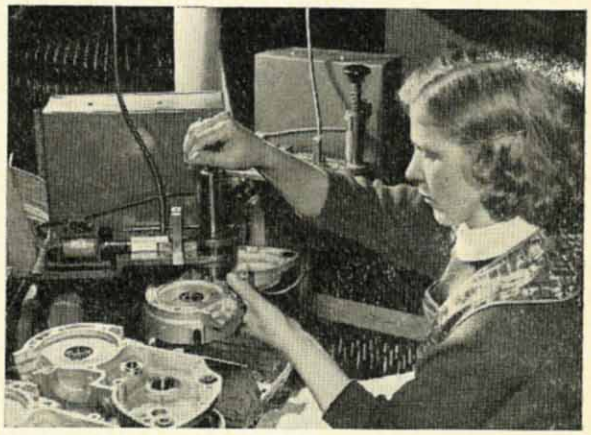
SACHS

A Visit to a German Factory at Work



Pressing in Bearings

HIGH up in the wooded hills of Bavaria, a long way from anywhere is the little town of Schweinfurt. Its industry relies basically on three large factories and one of these makes engines, *Sachs* engines that go all over the world.

We in Britain are most familiar with the 50 c.c. mo-ped units which are featured in both British and Continental built machines, but the range is wider than this. There are atmosphere and blower coolled engines of 98, 174 and 191 c.c. made at the Fichtel and Sachs works and a very interesting industrial diesel of 600 c.c. In addition there is a huge scale production of cycle and mo-ped hubs and brakes and a lot more acres of factory space turning out clutches and suspension units for most of the cars made in Germany.

When we visited the works a few weeks ago we naturally spent our time on the sections involved in the production of units in the mo-ped and scooter fields, but the fact that the plant also produces a wider range of automotive components is by no means irrelevant as it means that manufacturing capacity is always more than adequate for any single section of the market and enables a flexible organisation to be economically operated.

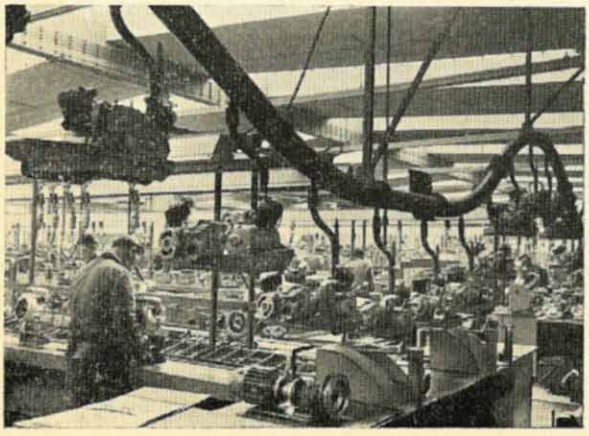
Flexibility in planning and operation was, in fact, one of the things we particularly noticed and admired while we were there. Machines were re-phased by the maintenance staff during a week-end and on Monday morning a new production line was actually operating. The assembly system was equally adaptable to the varying loads of batch production and even stores appeared to be organised without rigidity.

For example, although some bench inspection is inevitable and fully economic, most operations are checked actually on the machines in the course of production, the inspectors and tool setters moving constantly around the shops to maintain control. This system, it is claimed, maintains high standards for fine limit control without the risk of any loss in material or machining time.

Of the engines the famous *Sachs* "50" is the largest single production job. It is available in either two or three speed forms and atmosphere or blower cooled. In the latter form it is used in a useful range of commercial three-wheelers extensively used in Germany. We were struck by the attention to quality both in material and workmanship in this unit and were shewn a number of variations on the original designs as improvements have been incorporated in the light of experience over the years.

For sheer ingenuity the German engineers take quite a lot of beating as, for instance, in making a machine that feeds a neat circle of bearing rollers into their appointed places in a single motion, an idea dreamed up by a section foreman in the works. They even have a machine for busting the assemblies they have built—a powerful press that makes destruction tests on welded units. We noticed that those electrical spot welds were so tough that the metal would often tear before the weld would give.

As the various assemblies are completed they come together on the conveyer and the engines finally reach the test benches where



This conveyer carries engines right through the assembly stages to test beds and packing docks

each unit is run to fixed times and laid down standards before packing. Fichtel and Sachs do not, of course, make complete machines but there is a fleet of test mo-peds in which sample engines and all modifications are tried out continuously.

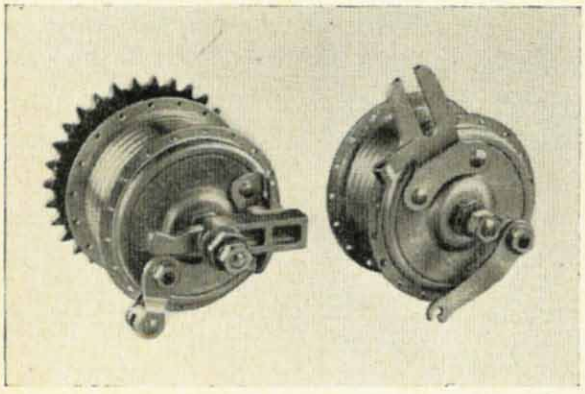
The larger engines are also supplied with variations in cooling systems and with alternative methods of starting for different purposes in motor cycles, scooters and microcars. The *S*200 for instance has a special three bearing mounting when used in the *Messerschmitt* cabin scooter which is what gives it that uncanny smoothness at high revs.

Apart from straight production there is a servicing shop where repairs are carried out and where rebuilt engines are made available on a service exchange basis. The cost of such a unit is around 60 per cent. of a new one but, it is claimed, the user gets the practical equivalent of a brand new engine in life and performance.

Making engines is one thing but making and keeping a market for them is another. Fichtel and Sachs are very much aware of this and they devote a lot of attention to ensuring that their products are backed by really good service *after* they have reached the hands of the public.

Inside the works there is a service school where dealers' staffs are trained in the servicing of *Sachs* units. The conditions of an ordinary agent's workshop are simulated in bench size and the work is done with the service tool kits actually supplied to the trade. To date seventeen British mechanics have been to Schweinfurt for training and it is hoped that more will go this year. Once having been through the course, the dealers can display the blue and white *Sachs* Service Sign and the customer then knows that there is a trained man available with the right tools for the job.

On the management side we enjoyed some interesting discussions with the competent team of executives in various branches. We were pleased to find that they fully shared our view that the German mo-ped had overgrown itself into a *neo*-motor cycle type and that a return to simplicity and economy was the key to any future development.

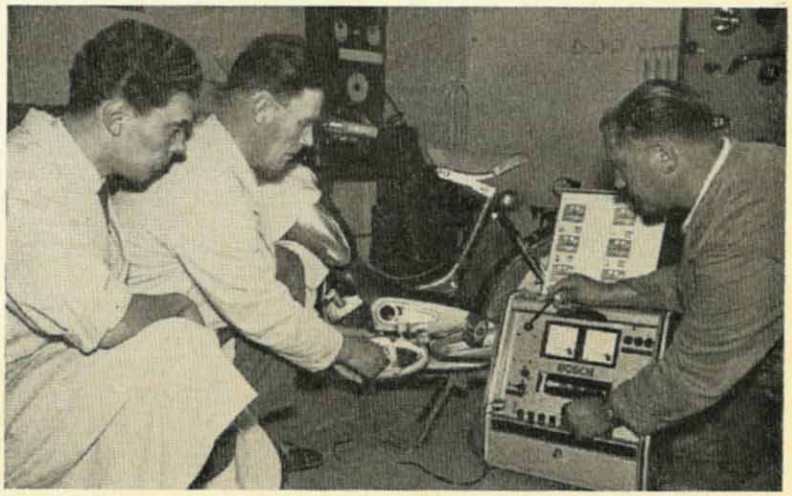


TOP : *Checking sixteen dimensions in one go by means of a battery of hydraulic meters.*

LEFT : *Mo-ped hubs.*

They looked forward to an expansion of overseas trade as tariff barriers give way under the influence of the Common Market and/or Free Trade Area schemes (Britain is still dithering about these) and we came away with the impression that whatever the competition the Fichtel and Sachs works will adapt themselves to market conditions and sell good machines for a range of jobs. Technically, engineering standards in Britain and Germany are very similar and a vigorous competition between the industries seems likely to keep both sides on their toes in world markets.

BELOW : *The Service School at work*



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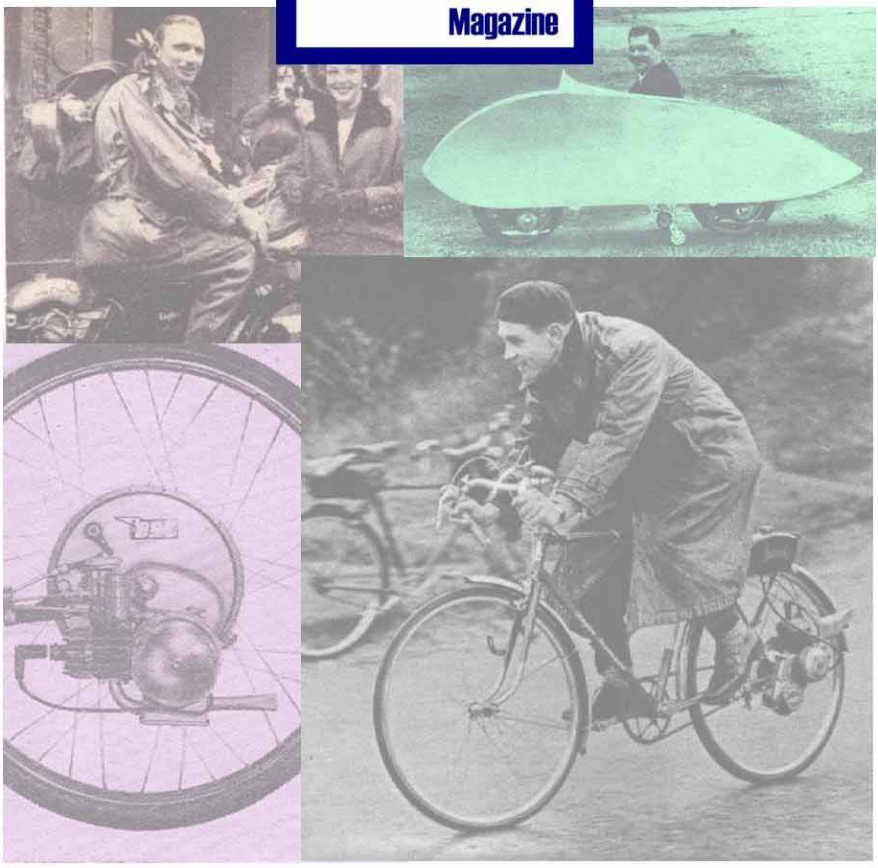

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